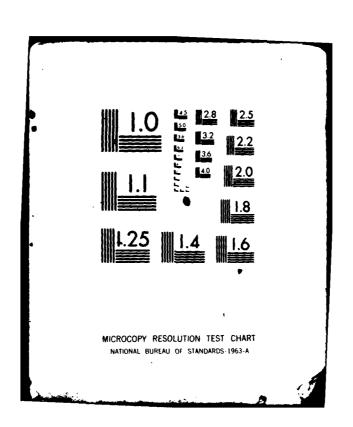
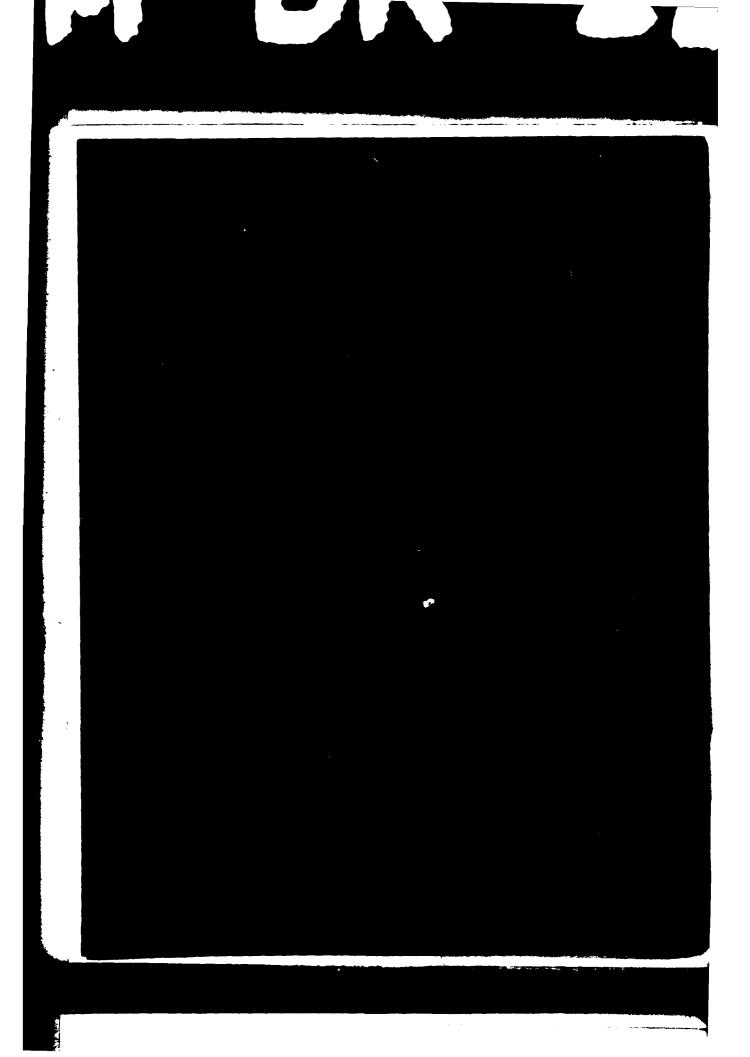
AD-A115 817 ARMY ELECTRONICS COMMAND WHITE SANDS WISSILE RANGE N--ETC F/6 4/2 19318A MLRS WISSILE HUMBERS V28-003, V15-005 ROUND HUMBERS V244--ETC(U) APR 82 D C KELLER ECOM-DR-1231 NL END DATE FILMED 7-82







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REPORT DOCUMENTATION PAGE	READ INSTRUCTIONS BEFORE COMPLETING FORM						
	3. RECIPIENT'S CATALOG NUMBER						
DR 1231 AD A 115017							
4. TITLE (and Subsisse) 19315A MLRS	S. TYPE OF REPORT & PERIOD COVERED						
Missile Number V428-003, V15-005							
Round Number V244/AT2-13, V245/AT2-14	6. PERFORMING ORG. REPORT NUMBER						
7. AUTHOR(a)	8. CONTRACT OR GRANT NUMBER(*)						
	d. Contract on Grant number(s)						
White Sands Meteorological Team	DA Task 1f665702D127-02						
9. PERFORMING ORGANIZATION NAME AND ADDRESS	10. PROGRAM ELEMENT, PROJECT, TASK						
3. PERFORMING ORGANIZATION NAME AND ADDRESS	AREA & WORK UNIT NUMBERS						
	1						
	<u> </u>						
II. CONTROLLING OFFICE NAME AND ADDRESS US Army Electronics Research & Development Cmd	12. REPORT DATE April 1982						
Atmospheric Sciences Laboratory	13. NUMBER OF PAGES						
White Sands Missile Range, New Mexico 88002							
14. MONITORING AGENCY NAME & ADDRESS(If different from Controlling Office)	15. SECURITY CLASS. (of this report)						
US Army Electronic Research and Development Cmd	UNCLASSIFIED						
Adelphi, MD 20783	154, DECLASSIFICATION/DOWNGRADING SCHEDULE						
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,							
26. ABSTRACT (Continue on severae state if necessary and identity by block number)							
Meteorological data gathered for the launching of Missile number V-23-003, V15-005, Round Number V24 are presented in tabular form.	the 19315A MLRS, 4/AT2-13, V245/AT2-14						
. '							

DD 1 JAN 75 1473 EDITION OF 1 NOV 68 IS OBSOLETE

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INTRODUCTION

19315A MLRS, Missile Numbers V28-003 and V15-005, Round Numbers V-244/AT2-13 and V-245/AT2-14, were launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1505:30 and 1505:35 MST, 20 April 1982. The scheduled launch times were 1500 and 1500:04.5 MST.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

- a. Surface
- (1) Standard surface observations to include pressure, temperature (O C), relative humidity, dew point (O C), density (gm/m 3), wind direction and speed, and cloud cover were made at the LC-33 Met Site at T-0 Minutes.
- (2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.
 - b. Upper Air
- (1) Low level wind data were obtained fro Pilot-Balloon observations at:

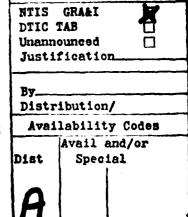
SITE AND ALTITUDE

WSD 2Km SMR 2Km

(2) Air structrue data (rawinsonde) were collected at the following Met Sites.

SITE AND TIME

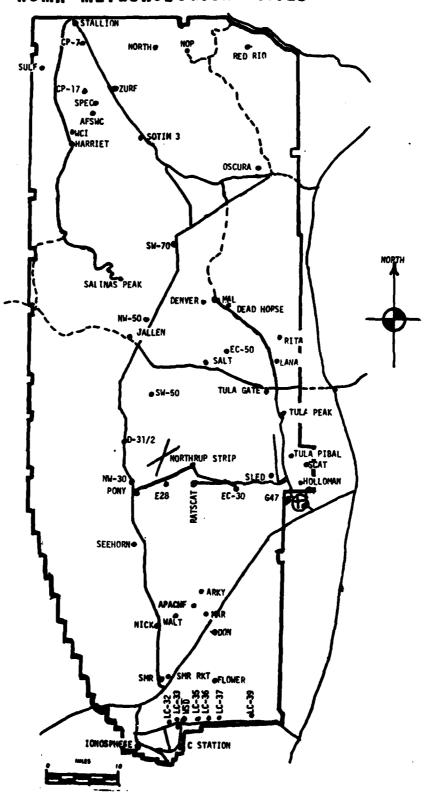
WSD 1200 MST LC-37 1300 MST WSD 1415 MST LC-37 1510 MST

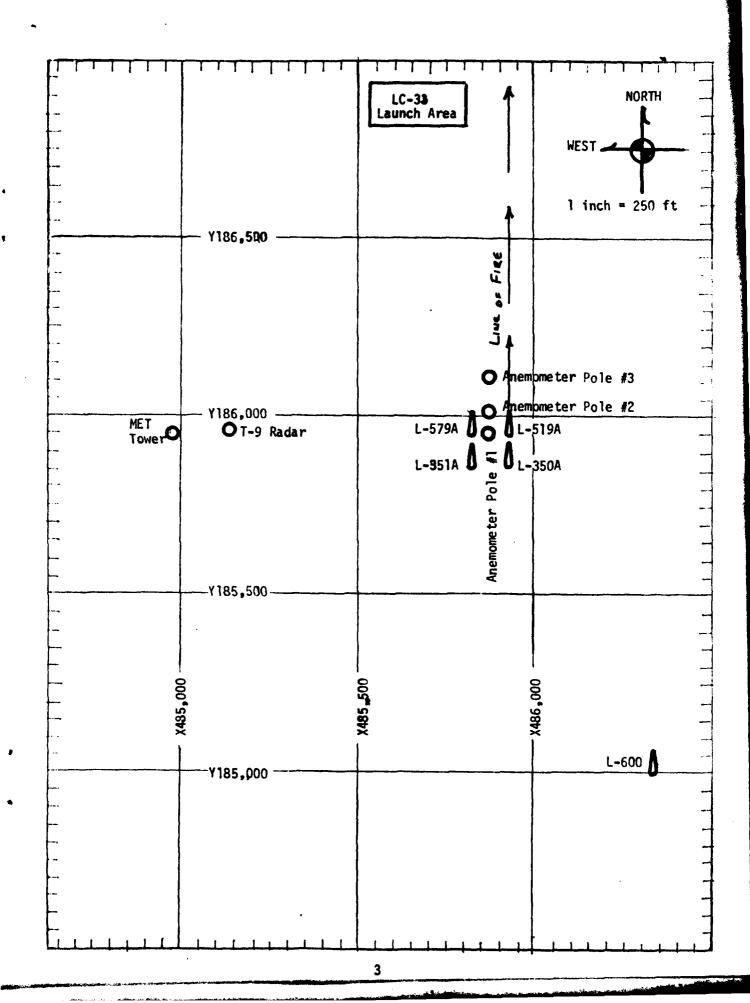


Accession For



WSMR METEOROLOGICAL SITES





PPOJECT SURFACE OBSERVATION

TABLE 1						TOTAL SOUNDE COSERVATION	100	Sex vn (- 1	STATION IC-33 F & A	-33 F & A		
DATE 20	APR	82) "	484.982	65 /= 1	X= 484,982,65 Y= 185,959,00	* 200F OO
				-		20 -	3/1 5 7 5 1/2				7	21.22.22	233.00
1125 12 S T	PRESSURE mbs	TE: PP	TEIPERATURE OF OC		DEW POINT		HUNIDITY	DE::S13Y 507/m3		DIRECTION degs In	WIND SPEED kts	CHARACTER	VISIBIL- ITY
1506	879.1		19.8			-2.5	.52	1 2	1041	120	1.2		8
													3
-	-								-	7			
	\perp				CI OUDS								
UES IRCCT 10:15		1st LAYER		2nc	1 LAYE	0.	3rd	IAYED			27.0	,	
IS VISIBIL.	A	TYPE	HGT	APIT	AM TYPE H	HGT	Ant	H LANDE I H	HG7		KETARKS	0	
	က	As	15,000	. 0	5	25,000				300			
					1	200		+		H ALUOS			
		+		\perp	1			-					
										-			
				1	1			_					

PUTATION	- 909
PSYCHROMETRIC COMPUTATI	15
PSYCHRO	
	TIPE:

TIME:	1506	
DRY BULE TELP.	19.8	
WET BULB TEMP.	8.8	
WET BULB DEPR.	11.0	
DEW POINT	-2.5	
RELATIVE HUMID.	22	

POLE #1 x485,87 Y185,95 H4018.7 38.7 ft	4.29 8.90 4		POLE #2 X485,874 Y186,012 H4033.53 53.0 ft	1,93 2,00 7		POLE # X485,87 Y186,11 H4063.9 83.6 ft	7.29 6.06 2	
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DI R DE G	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T =30	MISG	18	τ -30	158	17	T - 30	159	17
T-20	MISG	19	τ -20	154	18	T -20	144	21
T-10	MISG	19	T -10	150	16	T -10	140	21
Τ <u>ο.ο</u>	MISG	18	T 0.0	143	12	T 0.0	147	21
T+10	MISG	18	T +10	152	12	T +10	144	20
		l				_ I	1	T

TABLE 3 LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TO	TABLE	3 LC-3	3 METEOROLOGICAL	TOWER	ANEMOMETER	MEASURED WINDS	(202	FT	TOWER
---	-------	--------	------------------	-------	------------	----------------	------	----	-------

LEVEL #1, 12 X484,982.64		73, H3983.00 (base)	LEVEL #2, 62 X484.982.64,		3, H3983.00 (base)
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T - 30	135	13	T -30	130	17
T - 20	120	19	T -20	131	23
T -10	125	22	T -10	147	21
T0.0	120	17	T 0.0	144	21
T +10	151	12	T +10	148	16

LEVEL #3, 10 x484,982.64	02 FEET Y185,057.7	'3, H3983.00 (base)	LEVEL #4, 20 X484,982, Y1		3983.00 (base)
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T - 30	125	21	T -30	098	19
T -20	128	20	T -20	105	20
T ~10	130	22	T -10	108	20
T 0.0	131	23	Τ 0.0	101	21
T +10	137	19	T +10	105	22

THE PROPERTY OF THE STATE OF TH

19711 20 APRIL 82

SITE: WSD

711'E: 1530 MST

WSTY COMPRIMATES:

7= 488,580.00

Y≈ **185,045.00**

H= 3,989.00

STITE: SMR

TIME: 1506 MST

WSIN COORDINATES:

χ= **472,441.28**

Y = 214,137.54

H= 3,999.00

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS	LAYER MIDPOINT METERS AGL	DIRECTION	SPEED KNOTS
SURFACE	100	20	SURFACE	175	18
150	117	23	150	122	13
210	117	24	210	129	17
270	123	25	270	134	18
330	125	23	330	138	18
390	129	25	300	136	21
500	135	26	9,00	130	22
650	141	21	650	143	23
300	146	22	ខ្លាំ	156	21
920	148	24	950	167	19
1150	137	20	1150	178	14
1350	162	15	1350	175	18
1550	190	22	1550	178	19
1 7 50	211	29	1750	206	19
2000	225	32	2000	221	23

Data obtained from Nike-Herc Radar Tracked Pilot-Balloon observation.

Data obtained from RAPTS T-9 Radar Tracked Pilot-Balloon observation.

AIMING AND T-TIME COMPUTER MET MESSAGES 20 APRIL 1982

WSD 1200 MST METCM1324064 201900122881	LC-37 1300 MST METCM1324063 202000124880
00213020 29160881	00222010 29360880
01247016 28860871	01202020 28890870
02236019 28450845	02256017 28530844
03260015 28080805	03232020 28120805
04311016 27720758	04297016 27720757
05422015 27760712	05423018 27720712
06453026 27400670	06439026 27420669
WSD 1415 MST METCM1324064 202130122880	LC-37 1510 MST METCM1324063 202220124879
METCM1324064	METCM1324063
METCM1324064 202130122880	METCM1324063 202220124879
METCM1324064 202130122880 00213016 29260880	METCM1324063 202220124879 00196012 29220879
METCM1324064 202130122880 00213016 29260880 01249020 29100869	METCM1324063 202220124879 00196012 29220879 01223020 28970869
METCM1324064 202130122880 00213016 29260880 01249020 29100869 02252019 28790844	METCM1324063 202220124879 00196012 29220879 01223020 28970869 02216024 28650843
METCM1324064 202130122880 00213016 29260880 01249020 29100869 02252019 28790844 03242015 28380805	METCM1324063 202220124879 00196012 29220879 01223020 28970869 02216024 28650843 03230020 28290804

GEODETIC COORDINATES 32.40043 LAT DEG 106.37033 LON DEG															
ATA	REL.HUM. PERCENT	23.0	25.0	28.0	0.44	42.0	38.0	25.0	27.0	24.0	36.0	21.0	10.0	15.0	17.0
SIGNIFICANT LEVEL DATA 1100020163 WHITE SANDS TABLE 6	TEMPERATURE AIR DEWPOIN, DEGREES CENTIGRADE	-3.6	-6.5	9.9-	-8-3	-9.5	-6.7	-13.3	-14.0	-18.0	-18.2	-20.5	-31.4	-32.7	-35.2
SIGNIFIC 11 11 WH3	TEMPI AIR Degrees	17.8	13.1	11.2	2.7	2•0	t.4	5.1	3.2	• 1	-5.5	-8-1	-10.5	-11.3	-15.9
. EL	PKESSURE GEOMETRIC ALTITUDE ILLIBARS MSL FEET	3989.0	4521.2	4982.9	8124.8	8471.0	8606.8	9508.3	10201.5	11639.2	13853.0	14972.6	16518.3	17304.1	18845.8
STATION ALTITUDE 3989.NO FEET MSL 20 APR. 82 ASCENSION NO. 163	PRESSURE MILIBARS	881.1	4.498	850.0	756.6	746.8	743.0	718.4	700.0	663.0	0.609	583.0	548.6	531.8	200.0

STATION ALTI 20 APR - 82 ASCENSION NO	TUDE 39	3989.00 FEET M 1200 HRS MST 3	T MSL MST	_	UPPER AIR DAI 1100020163 WHITE SANDS TABLE 7	0.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5		6E0DETI 32. 106.	GEODETIC COOMDINATES 32.40043 LAT DEG 106.37033 LON DEG
GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	0	TEMPERATURE AIR DEMPOINT EGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY S GM/CUBIC METER	SPEED OF SOUND NNOTS	WIND DATA DIRECTION SPEED DEGREES(IN) KNOTS	SPEED KNOTS	INLEX OF REFRACTION
3989•0	881.1	17.8	-3.6	23.0	1052.9	665.2	120.0	20.0	1.000256
4000	-	17.7	-3.6	23.0	1052.6	_	120.1	20.0	1.000255
4500.0	865.1	13.3	-6.3	24.9	1050.3		124.1	18.8	
2000	844.5	11.2	9•9-	28.1	1039.1		128.6	17.7	•
5500-0	833.9	9.6	-6.7	30.6	1024.9	652.9	133.0	16.8	•
0000°	818.6	8•4	-6.8	33.2	1010.9		1.99.5	16.0	1.000243
0.0099 ·	803.5	7.1	-7.0	35.7	997.2		143.9	15.3	1.000240
70007	788.8	5.7	4-7-	38.3	983.0		140.4	14.6	1.000236
7500-6	774.3	†• †	-7.7	40.8	970.3		153.3	14.8	1.000233
0.000	760.1	3.0	-8.2	するのす	957.2	0.849	164.5	17.1	1.000230
6500-0		2.5	10-	41.1	941.4	647.3	181.0	16.6	•
0006 T-0006		9.5	-10.5	32.3	916.9		204.0	15.4	1.000218
9500		5.1	-13.2	25.1	898.7	650.2	230.5	15.4	
10000		3.8	-13.8	26•4	886.3		243.2	17.5	1.000208
10500.0		2.6	-14.8	26.4	873.6	647.2	248.1	19.7	1.000204
11000.6		1.5	-16.2	25.3	860.7	_	250.0	22.5	1.000200
11500.3	660.5	\$	-17.6	24.3	848.0		251.2	25.1	•
12000-7	653.9	8	-17.9	26.0	635.7		9-162	28.0	
12500-0	641.5	-2.1	-17.8	28.7	823.6		£50•1	29.9	
13000.0	629.3	-3.3	-17.9	31.4	811.8		248.0	31.8	1.000189
13500-0	617.3	9.4-	-18.0	34.1	800.1		247.7	32.7	1.000186
14000-10	600	-5.8	-19.1	34.0	788.5	637.2	247.1	32.9	1.000183
14500-	593	-7.0	-22.6	27.3	776.8		546.4	33.4	1.000178
15000.0	582	-8-1	-26.6	20.9	765.2		245.5	34.5	1.000174
15500-8	571.	-8.9	-28.1	19.3	752.6		245.0	35.6	1.000171
16000-0		-6-7	-29.7	17.7	740.1		246.3	36.9	1.000168
16500-0	54%	-10.5	-31.3	16.1	727.9		251.5	38.3	1.000165
17000-1	534•	-110	-32.2	15.4	715.0	630.9			1.000161
17500 oc		-11.9	-33.0	15.3	703.4	629.8			1.000159
18000.0	517.	-13.4	-33.8	15.9	693.4	628.0			1.000156
18500-0	507.	-14.9	-34.7	16.6	683.b	620.2			1.000154

MANDATORY LEVELS 1100020165 WHITE SANDS	TABLE 8
STATION ALTITUDE 3989.00 FEET MSL 20 APR. 62 1200 HRS MST	ASCENSION NO. 163

GEODETIC COORDINATES 32.40043 LAT DEG 106.37033 LON DEG

17.8	17.0	18.3	20.6	32.9	34.2	
28. 36.	45.	27.	27.	31.	16.	17.
-6.6 -7.1	-9-1	-14.0	-17.9	-20.7	-31.2	-35.2
11.2	2.5	3.5	-1.2	1-9-	-10.4	-15.9
4979.	8350.	10191.	12146.	14220.	16433.	18819.
850.0 800.0	750.0	100.0	650.0	0.009	550.0	500.0
	4979. 11.2 -6.6 28. 128.4 6626. 6.8 -7.1 36. 144.5	4979. 11.2 -6.6 28. 128.4 6626. 6.8 -7.1 36. 144.5 8350. 2.2 -9.1 43. 175.0	4979. 11.2 -6.6 28. 128.4 6626. 6.8 -7.1 36. 144.5 8350. 2.2 -9.1 43. 175.0 10191. 3.2 -14.0 27. 245.2	4979. 11.2 -6.6 28. 128.4 6626. 6.8 -7.1 36. 144.5 8350. 2.2 -9.1 43. 175.0 10191. 3.2 -14.0 27. 245.2 121461.2 -17.9 27. 251.3	4979. 11.2 -6.6 28. 128.4 6626. 6.8 -7.1 36. 144.5 8350. 2.2 -9.1 43. 175.0 10191. 3.2 -14.0 27. 245.2 121461.2 -17.9 27. 251.3 142206.4 -20.7 31. 246.8	850.0 4979. 11.2 -6.6 28. 128.4 17.8 800.0 6626. 6.8 -7.1 36. 144.5 15.1 750.0 8350. 2.2 -9.1 43. 175.0 17.0 700.0 10191. 3.2 -14.0 27. 245.2 18.3 650.0 121461.2 -17.9 27. 251.3 24.6 600.0 142206.4 -20.7 31. 246.8 32.9 550.0 1643310.4 -31.2 16. 251.0 34.2

STATION ALTITUDE 4051.37 FEET MSL 20 APR. 82 1300 HRS MST ASCENSION NO. 31		SIGNIFIC 11 LC- T/	SIGNIFICANT LEVEL DATA 1100140031 LC-37 TABLE 9	ATA	6E0DETIC COOL 32.40175 100.31232
PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	EOMETRIC LLIITUDE ISL FEET	TEMPE AIR DEGREES	TEMPERATURE AIR DEWPOINI DEGREES CENTIGKADE	REL.HUM. PERCENT	
4 880.3	.051.4	20.0	-5.0	18.0	
	470.5	14.0	-9.5	19.0	
	023.0	12.4	-10.5	19.0	
	246.6	5.4	-10.8	30.0	
	1818.7	2.3	9.6-	41.0	
	461.7	4.6	-15.2	22.0	
	243.3	3.6	-18.6	18.0	
	772.6	2.3	-18.9	19.0	
	106.8	1.6	-18.3	21.0	
	777.2	1	-17.7	25.0	
	12453.1	-1.6	-16.9	30.0	

STATION ALTITUDE 20 APR. 82 ASCENSION NO.	7)	4051.37 FEET MSL 1300 HRS MST	ET MSL MST	•	UPPER AIR DATA 1100180031 LC-37 TABLE 10	31 31		GEODET1 32. 106.	GEODETIC COOMUIHATES 32-40175 LAT DEG 106-31232 LON DEG
GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	A I DEGR	ERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	MIND DATA DIRECTION S DEGREES(IN) K	SPEED KNOTS	INDEX OF REFRACTION
4051.4	880.3	20.0	-5.0	18.0	1044.2	967.0	125.0	6.6	1.000251
4500·c		13.9	-9-3	19.0	1049.9		126.4	11.4	1.000248
5000.0		12.5	-10.5	19.0	1036.3		127.3	13.1	1.000244
5500 · c		10.9	-10.3	21.4	1023.0		128.1	14.7	1.000241
6.0009		9.3	-10.3	23.8	1009.9		128.0	16.4	1.000238
6500.0	805.0	7.8	-10.4	26.3	997.1	653.4	130.5	17.6	1.000235
7000.0		6.2	-10.6	28.8	984.4		1.77.0	17.0	1.000233
7500		6.4	-10.5	31.8	970.1		148.7	16.6	1.000230
8000+0		3.9	-10.0	35.3	956.0		7•191	17.3	1.000227
6500·		2.9	7-6-	38.8	941.5		182•2	16.0	1.000224
0.0006		2.9	-10.8	35.6	924.1		203.7	15.8	1.000219
0.0056		4.5	-15.4	21.8	902-1		250.5	17.0	1.000210
10000-0		3.8	-17.5	19.2	887.9		242.1	20.1	1.000205
10500.0		2.9	-18.8	18.5	874.3		247.1	23.0	1.000202
11000.0		1.8	-18.5	20.4	861.2		247.0	24.6	1.000199
11500-0		•	-17.9	23.3	848.8		7.66.0	25.3	1.000197
12000-0		9	-17.4	56. 6	836.5	643.5			1.000194

VEODETIC COOMDINATES 32.40175 LAT DEG 106.31232 LON DEG	TA Spece	KNOTS	3.1	17.4	5.0	1.5	
•		DEGREES (IN) KNOTS	127.3				
evels Sa	KEL . HUM.		19.	27.	38.	18.	24.0
1100140031 LC-37 TABLE 11	ERATURE	DEGREES CENTIGRADE	-10.5	-10.4	-9.9	-18.6	-17.1
Ì	TEMP	DEGREES (12.4	7.2	3.1	4. 0	C . [-
ET MSL MST	PRESSURE GEOPOTENTIAL	FEET		.0299			
ALTITUDE 4051.37 FEET MSL 82 1300 HRS MST DN NO. 31	PRESSURE	MILLIBARS	A50 • 0	800.0	750.0	700.0	450.0
ALTITUDE 682 ON NO. 3							

TAD	ASCENSION NO. 165
LIHM	20 APR. 82 1415 HKS MST
110	STATION ALTITUDE 3989.00 FEET MSL
SIGNIFICA	;

vEODETIC COORDINATES 32.40043 LAT DEG 106.37033 LON DEG

REL.HUM. PERCENT		18.0	29.0	30.0	46.0	43.0	34.0	31.0	37.0	31.0	16.0
TEMPERATURE AIR DEWPOINT	CENTIGHADE	-5.8	-2.0	-2.8	-6.7	3.5-	-11.1	-12.1	-15.3	-19.0	-27.6
TEMPER AIR (DEGREES (19.0	16.0	14.6	1.7	1.6	3.2	at off	-2.7	5.4-	-5.9
GEOMETRIC ALTITUDE	MSL FEET	3989.0	4522.7	8.4464	9168.5	9513.0	9470.5	10188.3	12748.6	3470.0	4993.2
PRESSURE	MILLIBARS		863.0	850.0	727.4	718.0			635.2		582.4

GEODETIC COOKUINATES 32.4U043 LAT DEG 106.37U33 LON DEG	INLEX OF HEFRACTION	1.000251	1.000251	1.000255	1.000251	1.000248	1.000244	1.000240	1.000237	1.000233	1.000229	1.000226	1.000222	1.000217	1.000210	1.000206	1.000203	1.000200	1.000196	1.000193	1.000189	1.000185	1.000161	1.000176
GEODETI 32. 106.	TA SPEED KNOTS	15.9	15.9	15.7	15.6	15.5	15.5	15.6	15.8	15.0	14.6	14.7	14.9	16.7	20.1	23.1	26.5	28.9	30.9	32.8	きょきの			
	WIND DATA UIRECTION SI DEGREES(IN) KI	120.0	150.1	123.9	127.8	131.7	1,95.7	139.0	143.5	153.0	163.9	1,5,1	194.0	214.2	229.0	255.4	240.5	242.0	242.9	つ・ササス	247.2			
25 S	SPEED OF SOUND KNOTS	900.4	4.099	663.4	661.4	659.6	657.8	656.0	654 • 3	652.5	650•6	8.849	0.449	640.3	648.2	4.7.49	_			641.7	640.3	636.8	638.2	637.6
UPPER AIR DATA 1100020165 WHITE SANDS TABLE 13	DENSITY S GM/CUBIC METER	1047.1	1040.9	1037.7	1025.5	1012.0	6-866	986.0	973.3	960∙8	949°5	936.4	924.4	h•606	887.2	872.6	860.0	847.5	835.3	823.2	811.4	799.6	785.7	772.1
	REL.HUM. PERCENT	18.0	18.2	28.5	30.2	32.1	34.0	35.9	37.8	39.7	41.6	43.5	45.4	43.1	32.8	31.7	32.9	34.1	35.2	36.4	34.9	30.7	25.8	50.9
T MSL MST	TEMPERATURE R DEWPOINT EES CENTIGRADE	-5.8	-5.7	-2.1	-2.8	-3.3	6.8-	-4.5	-5.2	-5.9	7-9-	-7.5	-8-4	9.6-	-11.5	-12.5	-13.1	-13.7	-14.3	-15.0	-16.6	-19.5	-21.6	-24.3
3989.00 FEET MSL 1415 HRS MST 5	TEMP AIR Degrees	19.0	18.9	16.1	14.4	12.9	11.4	6.6	8•3	6.8	5•3	3.7	2.2	1.6	3.3	2.7	1.5	۳.	6	-2.1	-3.3	-4.5	-5.0	-5.4
•	PRESSURE MILLIBARS	879.6	879.3	863.7	848.3	832.8	91/19	802.6	788.0	773.6	759.4	745.6	731.9	718.4	705.0	691.8	670.8	0.999	653.5	641.2	629.1	617.1	605.2	593.6
STATION ALTITUDE 20 APR. H2 ASCENSION NO. 1	GEOMETRIC ALTITUDE MSL FEET	3989.0	4000	4500.0	5000.0	5500.0	0.0009	6500.0	ິນ•000∠	7500-0	8000	8500.0	00006	9500-0	10000	10500-0	11000.0	11500.0	12000.0	12500.0	13000.0	13500.0	14000.0	14500.0

STATION ALTITUDE 3989.00 FEET MSL 20 APR. b2 1415 HRS MST ASCENSION NO. 165	EET MSL IS MST	2	MANDATORY LEVELS 1100020165 WHITE SANDS TABLE 14	evels ob os		GEODETIC COORDINATES 32.40043 LAT DEG 106.37033 LON DEG
PRESSURE	PRESSURE GEOPOTENTIAL	TEME	PERATURE	KEL. HUM.	WIND L	Ala
MILLIBARS	. FEET	DEGREES	DEGREES CENTIGRADE	PENCENI	DEGREES (TN) KNO	KNOTS
850·		14.6	-2.8	30.	127.3	15.6
.00A		9.6	2· h-	36.	5.041	15.7
750•		4.2	-7.3	43.	171.8	14.6
700-		4.6	-12.1	31.	231.7	21.2
0.059	0 12134.	-1.3	-14.5	36.	243.0	31.4
• 00 9 .		-5.5	-22.8	24.		

STATION ALTITUDE 4051 20 APR· 82 15 ASCENSION NO· 32	4051.37 FEET MSL 1510 HRS MST 12	3	SIGNIFICANT 110016/ LC-37 TABLE 15	SIGNIFICANT LEVEL DATA 1100180032 LC-37 TABLE 15)ATA	UEODETIC COULUINATES 32.40175 LAT DEG 106.31232 LON DEG
	PRESSURE MILLIBARS I	PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPE AIR DEGREES	TEMPERATURE AIR DEWPOINT DEGREES CENTIGHAUE	REL.HUM. PERCENT	
		4051.4	18.0	3.61	23.0	
	861.5	4605.9	14.4	6.2-	30.0	
		4977.6	13.2	-3.5	31.0	
		6590.7	0.6	0.9-	34.0	
		8807.3	2.8	1.6-	0-13	
•		9566.2	1.7	6.8-	0.54	
		9947.3	†	7.6-	36.0	
		10098.9	4.1	-10.3	34.0	
		10213.1	3.8	-10.2	35.0	
		12678.4	-2.5	-14.6	38.0	

GECDETIC COOMDINATES 32.40175 LAT DEG 106.31232 LON DEG	INUEX OF REFRACTION	1.000255	1.000255	1.000251	1.000247	1.000243	1.000239	1.000236	1.000232	1.000228	1.000225	1.000221	1.000218	1.000211	1.000208	1.000204	1.000201	1.000197	1.000194
6EGDETIC 32.4 106.3	TA SPEED KNOTS	12.0	17.0	22.6	27.1	23.9	20.6	17.2	15.4	17.1	19.0	21.9	24.2	25.8	27.7	29.6	30.1		
	#ING DATA DIRECTION S DEGREES(IN) K	110.0	117.3	121.0	144.1	125.3	127.4	153.0	143.0	150.5	171.4	190.2	7.907	221.6	251.4	238.0	239.4		
STATION ALTITUDE 4051-37 FEET MSL 1100180032 20 APR. 62 1510 HRS MST LC-37 ASCENSION NO. 32 TABLE 16	SPLED OF SOUND KNOTS	665.4	662.1	6-659	658.3	650.8	655.3	653.6	652.0	650.3	648.7	647.3	5.040	649.1	0.849	640.5	645.1	643.6	642.2
	DENSITY S GM/CUBIC METER	1049.4	1042.9	1031.3	1017.3	1003.6	1.066	970.7	963.6	950.7	937.9	924.4	906	885.4	871.9	859°4	847.1	835.0	823.0
	REL.HUM. PERCENT	23.0	28.7	31.0	32.0	32.9	33.8	35.3	36.9	38.5	0.04	45.0	44.7	35.3	35.3	36.0	36.6	37.2	37.8
	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	-3.4	-2.9	-3.6	. t-	-5.1	-5.9	-6.5	-7.2	6-1-	-8.6	-9.1	-8.9	6.6-	-10.7	-11.6	-12.5	-13.4	-14.2
	TEMP AIR Degrees	18.0	15.1	13.1	11.8	10.5	9.5	7.9	6.5	5.1	3.7	2.5	1.8	4.0	3-1	1.9	.7	5	-1.8
	PRESSURE MILLIBARS	878.8	864.8	849.3	833.9	816.9	804.1	789.3	174.8	760.5	746.5	732.7	719.0	705.6	h• 769	4.679	666.7	654.2	6+1+9
	GEOMETRIC ALTITUDE MSL FEET	4051.4	4500.0	50000	5500.0	6000°C	0.0059	7000-0	7500-D	8000	u500•0	0.0006	9500 • 0	10000.0	10500.0	11000.0	11500.0	12000-0	12500-0

MANDATORY LEVELS 1100160032 LC-37 TABLE 17	
STATION ALTITUDE 4051.37 FEET MSL 20 Apr. 82 1510 HRS MST ASCENSION NO. 32	

•EODETIC COOMDINATES 32.4U175 LAT GEG 106.31232 LON DEG

MA	SPEED KNOTS	22.3	2.6	18.7	6.8	
MIND DV	NI DIRECTION SPEED OF GREES(IN) KNOT	121.5				
REL. HUM.	PERCENT	31.	34.	* 0	35.	1
ERATURE	DEGREES CENTIGRADE	-3.5	-6.1	-8-5	-10.2	7.51-
TEMP	DEGREES	13.2	8.9	4.0	3.8	-1,0
POPOTENTIA	FEET	4974.	6633.	8370.	10203.	12161
PRESSURE GEOPOTENTIAL	MILLIBARS	850.0	800.0	150.0	200.0	650.0

DATE FILMED